

Nursing Intervention Study of Microscope-assisted Anterior and Posterior Fusion for Lower Cervical Spine Fracture and Dislocation

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To explore the nursing intervention measures of microscopy-assisted anterior and posterior fusion in the treatment of lower cervical spine fracture and dislocation. 46 patients with fracture and dislocation of lower cervical spine who were treated by microscope-assisted anterior and posterior fusion in our hospital from April 2018 to April 2019 were selected for this study, and divided into observation group and control group according to the different nursing interventions applied by the patients during the treatment. There were 23 patients in the two groups, while the patients in the control group were given routine nursing interventions. The patients in the observation group were given comprehensive nursing interventions. The curative effects of the treatment and nursing interventions in the two groups were observed, sorted out, analyzed and summarized. The changes of psychological status, recovery of spinal cord function, occurrence of complications and quality of life before and after nursing intervention were compared between the two groups. (1) Psychological status: Before nursing intervention, there was no significant difference in psychological status between the two groups, and there was no significant difference ($P > 0.05$); After nursing intervention, the SDS and SAS scores of patients in the observation group were better than those in the control group, and the difference was statistically significant ($P < 0.05$); (2) Recovery of spinal cord function: before nursing intervention, there was no significant difference in JOA scores of spinal cord function between the two groups, and the difference was not statistically significant ($P > 0.05$); After nursing intervention, JOA score of spinal cord function in the observation group was significantly better than that in the control group, the difference was statistically significant ($P < 0.05$); (3) Complication occurrence: Complication incidence in the observation group was lower than that in the control group, the difference was statistically significant ($P < 0.05$). (4) Quality of life: before nursing intervention, there was no significant difference in QOL scores between the two groups, and the difference was not statistically significant ($P > 0.05$); after nursing intervention, the QOL scores of patients in the observation group were better than those in the control group, and the difference was statistically significant ($P < 0.05$). Through the analysis, it was found that the operation of microscope-assisted anterior and posterior fusion therapy was more complicated and the risk of treatment was greater. The comprehensive nursing interventions throughout the preoperative, intraoperative and postoperative period played a vital role in improving the treatment effect of patients, which was not only conducive to the effective recovery of patients' spinal cord function. At the same time, it can avoid complications in the treatment process, so as to promote the early recovery of the patient's condition and improve the quality of life. In general, the application of comprehensive nursing interventions in the treatment of lower cervical spine fracture patients has higher application value, which is worthy of clinical vigorous promotion and application.

Keywords: Microscopic Assistance, Anterior and Posterior Fusion, Lower Cervical Spine, Fracture and Dislocation, Nursing Intervention

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Lower cervical spine fracture and dislocation is a serious cervical trauma disease in clinic. Patients often have spinal cord injury with different degrees. Because the treatment is difficult and belongs to severe trauma, the disability rate and fatality rate are high. With the rapid development of society, the incidence of falls, violent incidents and traffic accidents is on the rise, while the prevalence of lower cervical spine fracture and dislocation (FDLCS) is also gradually increasing, accounting for about 10% of the total body fracture injury. At the same time, it accounts for about 6.7% of cervical trauma diseases, and most patients with lower cervical spine fracture and dislocation will have combined spinal nerve injury, the incidence of which is as high as 90%¹. Lower cervical spine fracture and dislocation generally refers to that the vertebrae of neck 3-7 are injured under a series of external forces such as flexion, compression, rotation, shear and extension, which ultimately lead to changes in the three-column structure of spinal stability, because most of them cause damage to the disc tissue. Therefore, leading to the protrusion of the annulus fibrosus and then causing compressive injury to the spinal cord, often will also be accompanied by loss of intervertebral height, dislocation of the articular process strangulation and disappearance of normal physiological curvature, etc.². Clinical treatment for patients with fracture and dislocation of the lower cervical spine usually focuses on restoring the normal intervertebral height and physiological curvature of the cervical spine, eliminating the compression of the spinal cord by the prominent annulus fibrosus, and reconstructing the stable structure of the spine. Because of the high morbidity and mortality rate of severe spinal cord injury, all patients are often treated with microscope-assisted anterior and posterior fusion for lower cervical spine fracture and dislocation, and the curative effect is still acceptable after treatment³. Complications are prone to occur during treatment, which eventually leads to recurrence or aggravation of the disease. Relevant studies have shown that effective nursing intervention during the treatment of patients with lower cervical fracture and dislocation can improve the clinical efficacy. In this study, 46 patients with fracture and dislocation of lower cervical spine

admitted to our hospital were studied, aiming to explore the nursing intervention measures for the treatment of fracture and dislocation of lower cervical spine by microscope-assisted anterior and posterior fusion, and the specific analysis is as follows.

DATA AND METHODS

General Information

From April 2018 to April 2019, 46 patients with fracture and dislocation of lower cervical spine who were treated by microscope-assisted anterior and posterior fusion in our hospital were selected for this study, and divided into observation group and control group with 23 patients in each group according to the different nursing interventions applied by the patients during the treatment. Observation group: There were 14 males and 9 females, aged 24-64 years, with an average age of (45.38 ± 5.69) years. There were 9 traffic accidents, 5 falls, 6 falls and 3 crushes among the patients. 9 cases of fracture-dislocation strand, 4 cases of mixed injury, 4 cases of vertebral arch fracture, 6 cases of laminar vertebral arch fracture. According to the ASIA classification of spinal cord injury, there were 6 grade A patients, 7 grade B patients, 6 grade C patients and 4 grade D patients. The control group consisted of 13 males and 10 females, aged 23-65 years, with an average age of (45.45 ± 5.46) years. There were 8 traffic accidents, 6 falls, 5 falls and 4 bruises. There were 7 cases of fracture-dislocation strand, 5 cases of mixed injury, 6 cases of vertebral arch fracture and 5 cases of laminar arch fracture. According to the ASIA classification of spinal cord injury, there were 5 grade A patients, 8 grade B patients, 7 grade C patients and 3 grade D patients. The hospital ethics committee was informed and approved to conduct the study. There was no significant difference in general data between the two groups ($P > 0.05$), which was comparable.

Inclusion criteria: 1. Compliance with relevant diagnostic criteria in the Guidelines for Evidence-based Clinical Diagnosis and Treatment of Acute Lower Cervical Spinal Cord Injury in Adults (2018 Edition)⁴; 2. Acceptance of microscopy-assisted anterior and posterior fusion therapy³. No psychiatric disease, normal cognition,

able to effectively cooperate with treatment and nursing; 4. Patients and their families were informed about the study and signed relevant informed consent.

Exclusion criteria: 1) those aged >65 years and younger than 18 years; 2) those classified as grade E according to ASIA of spinal cord injury; 3) those with severe complications such as arrhythmia, heart failure and shock; 4) those with severe mental illness and cognitive abnormality, who cannot cooperate with treatment and nursing; and 5) those with severe liver, kidney and other organ diseases.

Methods

Therefore, all patients underwent microscope-assisted anterior and posterior fusion therapy.

(1) Control group

Patients in the control group were given routine nursing interventions, and nurses provided routine nursing interventions such as medication guidance and dietary care to patients; patients' clinical changes were closely observed, and basic medical services for patients were provided⁵.

(2) Observation group

Patients in observation group were given comprehensive nursing intervention measures, the specific contents were as follows:

Preoperative nursing: 1. Psychological nursing: patients will have strong fear, depression and tension because of unexpected events leading to lower cervical spine fracture. At the same time, they are eager to know the severity of their condition, fear that the severity of their condition will endanger life, and also want to know the treatment content and effect of lower cervical spine fracture⁶. Nursing staff should closely communicate with patients in this situation, pay attention to the psychological dynamics of patients, and give corresponding psychological counseling according to the actual situation of patients to help patients improve treatment compliance. In addition, they should also inform patients of the fact that there will be functional impairment, and introduce to them the importance of high-level medical technology and surgical treatment in our hospital for patients' condition. And give examples of successful cases in the past, so as to alleviate a series

of negative emotions such as anxiety, depression, fear and tension, so that patients can maintain a good psychological state for effective treatment and care⁷. (2) Skull traction nursing: nursing staff should also strengthen ward patrol and adjust skull traction timely according to the patient's condition, so as to ensure the effectiveness of skull traction. The traction direction must be on the same horizontal line as the spine. Sandbags should be placed on both sides of the neck and fixed to the neck to avoid secondary injury caused by the rotation of the neck. Nurses should not relax the traction when assisting the patient to turn over, and pay attention to the coordination of the head, neck and trunk of limbs, while the cervical spine remains fixed. Patients should not lie on their side for a long time. Nursing staff should also place a water pad on their sacrococcyx and massage the patients regularly. 75% alcohol should be used to drip twice a day to the traction needle hole. Before each drip, the blood scab around the needle eye must be removed to avoid infection. In addition, the head and pillow should be massaged every 2-4 h to avoid bedsores⁸.

Intraoperative Nursing: 1) Cooperative Nurse: Patients should actively communicate with them after entering the operating room, so as to avoid fear caused by unfamiliar alleviation of the operating room. After checking the specific data of patients with the surgeon and anesthesiologist and the surgical site, the indwelling device should be used to establish the corresponding peripheral venous access for patients and extend the connecting tube for administration during the operation. Assist anesthesiologists to perform arterial manometry and anesthesia induction for patients. During endotracheal intubation, anesthesiologists should be reminded to maintain the neutral position of the patient's cervical spine to prevent iatrogenic spinal cord injury caused by cervical hyperextension⁹. (2) Posture nursing: according to the needs of surgery, the corresponding surgical position should be taken, which should not only maintain the functional position of the patient's spine, but also ensure the safety of the patient during the operation, but also show the best vision of the operation, so the placement of the surgical position needs to meet

the surgical needs as much as possible. At the same time, patients should keep their breath smooth during the operation, and complications should be effectively prevented ¹⁰. (3) Nurse cooperation: because of the risk of surgical treatment and the long operation time, instrument nurses should pay attention to concentrate their efforts, correctly make an effective judgment of the operation, accurately cooperate with and execute the doctor's instructions, so as to ensure the stability, accuracy and speed of the operation steps, and shorten the operation time as much as possible. Due to the large number of medical devices required during the operation, a reasonable visit is needed. The instruments that are not needed for the time being should be covered with a treatment-free towel. In addition, the layout of the sterile table and surrounding sterile areas should be strictly implemented in accordance with the principle of sterility, and the needs of operation should also be facilitated. Preoperative, intraoperative and postoperative device nurses should carefully check the surgical items on the device table with the circulating nurses, and record them in detail after verification. (4) Observation of intraoperative conditions: Nurses should closely observe the changes of patients' vital signs (heart rate, respiration, oxygen saturation, blood pressure and partial pressure of carbon dioxide) during the operation, and pay attention to check whether the venous access works normally. If there are abnormalities, doctors should be informed in time for corresponding treatment. In addition, attention should be paid to the progress of the operation to ensure adequate supplies of articles on the instrument table. The surgeon in charge of the operation should strictly follow the aseptic operation to avoid the occurrence of infection in the operating room ¹¹.

Postoperative nursing: 1. General nursing: use neck brace to brake the neck of patients after operation, avoid the idea of bone graft block caused by excessive tilt, rotation and flexion, and give patients ECG monitor for real-time monitoring and oxygen inhalation, closely observe the changes of blood oxygen saturation and various vital signs. (2) Maintain smooth breathing: patients with lower cervical spine fracture will have intercostal

ventilator paralysis due to spinal cord injury, which will affect the respiratory status, so nursing staff should closely observe the respiratory status of patients before, during and after surgery. Check carefully whether there is obvious swelling in the surrounding tissue structure after the operation. If there is blood in the wound, it will lead to neck hematoma, which will compress the respiratory tract of the patients, resulting in poor breathing, and the severity may even lead to asphyxia and death of the patients. If the above situation occurs, the doctor should be promptly informed to deal with it. If necessary, the suture of the patient should be cut open and the hematoma should be removed to keep the respiratory tract unobstructed, and oxygen inhalation should be continued. Encourage patients to take deep breaths and instruct them to cough and expectorate effectively. If sputum is sticky, pat the bottom of their lungs and inhale aerosol to remove sputum. (3) Body temperature nursing: Spinal cord injury will lead to autonomic nervous system dysfunction, so that patients' own body temperature regulation will be abnormal, prone to high-temperature conditions. In view of this situation, it is necessary to maintain the temperature in the ward at 24°C-26°C, and use ice packs to treat the head of patients and the pulsation of large blood vessels, as well as alcohol bath to reduce the body temperature of patients, if necessary, to treat with cooling drugs ¹². (4) Skin care: help the patient turn over regularly, with an interval of 2-3 h, and massage the compressed part. During the turning process, attention should be paid to holding the head of the patient with both hands. Traction is also applied to ensure that the head, neck, and trunk of the limbs are in a horizontal line. For patients who have developed bedsores outside the hospital, they should ensure that their bedsores and surrounding skin are dry. Infrared rays should be used every day to bake their bedsores, so as to effectively clear the necrotic tissues, and change dressings regularly according to the patient's bedsores, so as to avoid further spread of inflammation and local re-compression. Prevention of urinary tract infection: patients with fracture and dislocation of lower cervical spine are often in a state of bladder muscle atonia, in this case, they need to continue to open the urinary

catheter, drain the urine, so that the bladder does not overload operation, to avoid damage. If the patient's bladder muscle tension is restored, the emission will occur. In response to this situation, regular open urinary catheter drainage with clamp should be implemented, which can effectively stimulate the recovery of bladder function, once every 2-3 h, and encourage patients to drink more water. The urine collection bag needs to be replaced every day, and the catheter needs to be replaced once a week. After 2-3 weeks of indwelling urine tube, it can burst out. The crushing method is also applied to help patients with reflex urination of the bladder. During the process of crushing, the movements should be gentle, in a light-to-heavy manner, until the patient has finished urination. At the same time, pay close attention to the cleaning of perineum and sheets to avoid retrograde infection. Nursing of incision and negative pressure drainage: Closely observe whether there is bleeding in the surgical incision of patients, check the specific situation of negative pressure drainage and record it in detail, including drainage volume, characteristics, etc., pay attention to whether the drainage tube works normally, whether there is distortion, detachment, and compression.

Observation Index

Observe the curative effect of two groups of patients after treatment and nursing intervention, through observation, sorting out, analysis and summary, compare the changes of psychological status, recovery of spinal cord function, occurrence of complications and quality of life of two groups of patients before and after nursing intervention.

(1) Psychological changes: depression was assessed using the Self-rating depression scale (SDS). The scale is simple and intuitive to reflect the subjective feelings of patients with depression and the specific changes in treatment. It is a commonly used psychometric tool. According to the results of the normal model in China, the SDS standard score has a decomposition score of 53, 53-62 indicating mild depression, 63-72 indicating severe depression, and >73 indicating severe depression. Anxiety was assessed using the Self-Rating Anxiety Scale (SAS). It is an effective criterion for assessing anxiety. It is suitable for

measuring the severity of patients' anxiety state and changes in the course of treatment. It is a commonly used psychometric tool. Generally, a total score of less than 50 indicates normal, a score of 50-60 indicates mild, a score of 61-70 indicates moderate, and a score of more than 70 indicates severe anxiety.

(2) Recovery of spinal cord function: JOA score is mainly used to evaluate the functional impairment of human body. The total score of JOA is 29, and the lowest score is 0. The lower the score is, the more serious the spinal cord dysfunction is, and vice versa, the better the recovery of spinal cord function is.

(3) Quality of life: The quality of life was assessed using the Quality of Life (QOL) score. The evaluation content mainly refers to the specific state of the patient's physiological, psychological and social functions, mainly refers to the state evaluation of the individual's physiological, psychological and social functions. The scores of the three aspects are all 60 points. The higher the score, the better the patient's quality of life, and vice versa, the worse the quality of life.

Statistical Methods

The data obtained in this study were included in SPSS22.0 statistical software for analysis, and the comparison of counting data was made by χ^2 comparison, expressed as rate (%), and the comparison of measurement data was made by t test. And expressed as ($\bar{x} \pm s$), if ($P < 0.05$), the difference is significant, $P < 0.01$ has a very significant difference.

RESULTS

Comparison of Psychological Status between Two Groups before and after Nursing Intervention

Before nursing intervention, there was no significant difference in psychological status between the two groups, and the difference was not statistically significant ($P > 0.05$); after nursing intervention, SDS and SAS scores of patients in observation group were better than those in control group, and the difference was statistically significant ($P < 0.05$), see Table 1.

Table 1.

Comparison of psychological status between two groups before and after nursing intervention ($\bar{x} \pm s$, points)

Group	Cases	SDS		SAS	
		Pre-intervention	Post-intervention	Pre-intervention	Post-intervention
Observation group	23	52.38 \pm 3.28	35.48 \pm 1.48	51.38 \pm 2.89	34.31 \pm 1.49
Control group	23	52.41 \pm 3.42	43.38 \pm 1.35	51.34 \pm 2.57	40.59 \pm 1.42
<i>t</i>		0.030	18.913	0.050	14.633
<i>P</i>		0.976	0.000	0.961	0.000

Comparison of Spinal Cord Function between Two Groups before and after Nursing Intervention

Before nursing intervention, there was no significant difference in JOA score of spinal cord function between the two groups, and the

difference was not statistically significant ($P > 0.05$); after nursing intervention, JOA score of spinal cord function in the observation group was significantly better than that in the control group, and the difference was statistically significant ($P < 0.05$), see Table 2.

Table 2.

Comparison of spinal cord function scores before and after nursing intervention between the two groups ($\bar{x} \pm s$, points)

Group	Cases	JOA	
		Pre-intervention	Post-intervention
Observation group	23	13.48 \pm 1.48	20.59 \pm 0.39
Control group	23	13.08 \pm 1.36	15.49 \pm 0.54
<i>t</i>		0.954	36.719
<i>P</i>		0.345	0.000

Comparisons of Complication Rate between Two Groups

The incidence of complications in the

observation group was lower than that in the control group, and the difference was statistically significant ($P < 0.05$), as shown in Table 3.

Table 3.

Comparisons of complication rates between the two groups [n (%)]

Group	Cases	Nerve injury	Incision infection	Cerebrospinal fluid leakage	Graft block displacement	Incidence rate (%)
Observation group	23	1(4.35)	0(0.00)	0(0.00)	0(0.00)	1(4.35)
Control group	23	2(8.70)	2(8.70)	1(4.35)	1(4.35)	6(26.09)
χ^2						4.213
<i>P</i>						0.040

Comparison of Quality of Life between Two Groups before and after Nursing Intervention

Before nursing intervention, there was no significant difference in QOL scores between the two groups, and the difference was not statistically significant ($P > 0.05$); after nursing intervention,

the QOL scores of patients in the observation group were better than those in the control group, such as physiological, psychological and social functions, the difference was statistically significant ($P < 0.05$), see Table 4.

Table 4.

Comparison of quality of life before and after nursing intervention between the two groups ($\bar{x} \pm s$, points)

Group	Cases	Physiology		Psychology		Social function	
		Pre-intervention	Post-intervention	Pre-intervention	Post-intervention	Pre-intervention	Post-intervention
Observation group	23	34.04 \pm 1.59	50.49 \pm 3.58	32.39 \pm 2.35	49.69 \pm 4.81	36.48 \pm 2.49	50.56 \pm 3.21
Control group	23	34.19 \pm 1.99	41.58 \pm 3.46	32.69 \pm 2.21	39.68 \pm 4.25	36.32 \pm 2.42	42.49 \pm 3.24
<i>t</i>		0.282	8.583	0.446	7.479	0.221	8.486
<i>P</i>		0.779	0.000	0.658	0.000	0.826	0.000

DISCUSSION

Lower cervical spine fracture and dislocation is a common surgical disease, generally caused by a series of external forces such as flexion violence, compression, rotation, shear and extension. When the patient's head and neck are subjected to the force of flexion, the main fulcrum of cervical vertebral activity is in the mid-posterior position of the intervertebral disc, because the facet articular surface of the human cervical vertebra is relatively flat, and the angle with the horizontal plane is 45 degrees, the sudden external force causes the joint capsule to be torn by the inferior articular process of the human cervical vertebra, thus causing the joint to warp upward¹³. The external force itself has a certain inertia, combined with the main role of the skull, which eventually leads to a persistent forward displacement of the superior inferior joint, and the overall upper vertebral body also moves forward with the inferior joint. When the external force disappears, the neck muscle of the human body has a certain contraction effect, and its contraction is elastically fixed. The upper and lower joints of the cervical spine play an interdependent role to form the opposite apex; the lower articular process of the upper vertebral body further crosses the upper articular process of the lower vertebral body, and the connection between the upper and lower vertebral bodies is abnormal, thus leading to the phenomenon of joint prominence strand, while the rotational violence will cause unilateral articular process strand. If the human body suffers from excessive flexion violence trauma, the three-column structure of cervical stability will be seriously damaged, which will cause certain damage to the anterior and posterior longitudinal ligaments, capsular ligaments, interspinous ligaments and yellow ligaments. When the intervertebral disc is injured, it will pull out posteriorly and compress the spinal cord. If the affected vertebral body dislocates anteriorly and inferiorly, the patient will have a fracture of the articular process or a compression fracture of the cervical vertebral body. At present, the common clinical cervical vertebral fracture and dislocation bring damage to the human body, which will lead to changes in the morphology of the segmental spinal canal, resulting in a series of mechanical effects such as

compression and shearing of the spinal cord, causing varying degrees of damage to the human body, and more serious patients will even cause complete anatomical transection of the spinal cord, with unimaginable consequences.

Clinical treatment for patients with fracture and dislocation of the lower cervical spine usually focuses on restoring the normal intervertebral height and physiological curvature of the cervical spine, eliminating the compression of the spinal cord by the prominent annulus fibrosus, and reconstructing the stable structure of the spine. Spinal cord injury is very likely to cause paralysis of patients, especially in high-risk patients with spinal cord injury, even complete paralysis, but also complicated with a series of symptoms such as pressure ulcers, hypoplastic pneumonia and urinary tract infections. The more serious condition will lead to death due to organ failure¹⁴. Therefore, patients with spinal cord injury should actively cooperate with the treatment, and those without spinal cord injury can be treated with skull traction conservatively. However, if patients with lower cervical spine fracture and dislocation combined with spinal cord over age cannot effectively treat cervical spine reduction and eliminate spinal cord compression by skull traction alone, usually, the clinical effect is not ideal, then surgical treatment should be carried out as soon as possible. For patients with lower cervical spine fracture and dislocation, surgical treatment includes simple anterior approach, simple posterior approach and combined anterior and posterior approach. Anterior surgery is directed at patients with structural destruction of the anterior column of the spine, particularly disruption of disc tissue, and protrusion into the spinal canal leading to compression of the anterior spinal cord. Posterior surgery is appropriate for patients with posterior column injury resulting in compression of the spinal cord by fracture fragments¹⁵. Anterior and posterior combined surgery is aimed at patients with simultaneous injury to the three-column structure of the cervical spine and certain compression of the anterior and posterior spinal cord. At present, clinical microscopy assisted anterior and posterior fusion therapy is mature enough, and microscopic surgery technology has

strong advantages for spinal surgery, is a new minimally invasive technology. The operation assisted by the microscope can not only reduce the amount of blood in patients with lower cervical fracture and dislocation, but also improve the accuracy of the operation, which is a better choice for patients with lower cervical fracture and dislocation.

From the results of this study, it can be seen that after nursing intervention, a series of quality-of-life scores such as SDA, SAS score, JOA score of spinal cord function, incidence of complications and physiological, psychological and social functions in the observation group were significantly better than those in the control group. This indicates that comprehensive nursing intervention measures applied in the treatment of lower cervical spine fracture and dislocation patients with microscope-assisted anterior and posterior fusion can achieve good nursing effect. Routine nursing generally refers to nursing intervention for all patients with the existing routine conditions, and its nursing intervention content is more one-sided. In addition, the patients with cervical vertebral fracture and dislocation have special conditions, such as slight leakage of nursing work will increase the risk of disability and death. Therefore, for the nursing work of patients with lower cervical spine fracture and dislocation, there are great limitations in the application of conventional nursing intervention. Comprehensive nursing is now a widely used nursing intervention mode in clinical practice. Its nursing concept is mainly patient-centered, while implementing the nursing responsibility system, and further strengthening the professional quality training of nursing staff, aiming to improve the overall level of nursing service. According to the concept of patient-centered nursing, it is required that nursing staff should be based on the perspective of patients in terms of medical behaviors and ideas, put the needs of patients in the first place in nursing, carry out targeted nursing interventions according to the needs of patients, control service costs, formulate the most important measures on the basis of improving service quality, and constantly simplify the workflow. Targeted nursing intervention according to the needs of patients has a certain

comprehensive and efficient effect. The application of this nursing mode in the treatment of patients with lower cervical spine fracture and dislocation can not only effectively improve the clinical therapeutic effect, but also promote the recovery of patients' condition. Comprehensive nursing intervention throughout the preoperative, intraoperative and postoperative period, not only provides basic medical services to patients, but also carries out a series of nursing interventions, such as psychological care, skull traction care, body temperature care, skin care, observation of disease development and prevention of complications. Nursing intervention has a certain comprehensive and professional content, which will also play a positive role in the treatment effect of patients' surgery. In the course of treatment, patients with lower cervical vertebra fracture and dislocation cooperate with comprehensive nursing intervention, which not only alleviates the physical and mental pain of patients, but also speeds up their recovery speed.

CONCLUSION

In summary, the operation of microscope-assisted anterior-posterior fusion therapy is complex and the risk of treatment is high. It plays a vital role in improving the treatment effect of patients by penetrating comprehensive nursing interventions before, during and after the operation. It is not only conducive to the effective recovery of spinal cord function, but also can avoid complications in the treatment process, thus promoting the early recovery of patients' conditions and improving the quality of life. In general, the application of comprehensive nursing interventions in the treatment of lower cervical spine fracture patients has higher application value, which is worthy of clinical vigorous promotion and application.

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